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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,385	02/28/2002	Hiroshi Sakamoto	381NP/50859	8361

23911 7590 12/01/2005

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EXAMINER	
LE, DAVID D	

ART UNIT	PAPER NUMBER
3681	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/084,385	SAKAMOTO ET AL.	
	Examiner	Art Unit	
	David D. Le	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,14,15 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 14, 15, 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This is the fifth Office action on the merits of Application No. 10/084,385, filed on 28 February 2002. Claims 1-3, 14-15, and 18 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:

- Information Disclosure Statement, received on 02/28/02
- Foreign Priority Document, received on 02/28/02
- Translation of Foreign Priority Document, received on 07/07/04
- Information Disclosure Statement, received on 08/26/04

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 October 2005 has been entered.

Specification

4. The disclosure is objected to because of the following informalities:

The change of the present claimed invention from a power transmission apparatus to a control unit for the power transmission apparatus has caused the SUMMARY OF THE INVENTION and the ABSTRACT OF THE DISCLOSURE to inaccurately reflect the present claimed invention. Appropriate correction is required.

Claim Objections

5. Claim 2 is objected to because of the following informalities:

- Line 12, "said central control" should be --said control unit--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-3, 14-15, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1:

- Line 12 recites, in part, the limitation "said control unit is configured to drive said first or second motor". This limitation appears to be inaccurate because the control unit, as disclosed in the present specification, does not provide power to drive such motor(s).
- Lines 13-14 recite, in part, "output shaft torque". It is unclear whether this output shaft torque is the engine output shaft torque or the transmission output shaft torque. For the purpose of applying the art rejection(s), examiner interprets this output shaft torque as the transmission output shaft torque.

Claim 2:

- Line 12 recites, in part, the limitation "said control unit is configured to drive said first or second motor". This limitation appears to be inaccurate because the control unit, as disclosed in the present specification, does not provide power to drive such motor(s).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 3 and 14-15, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/26559.

Note:

To facilitate a better understanding as well as greater accuracy in explaining the following claim rejections, the examiner will refer to the U. S. Patent No. 6,712,734 to Loeffler, which is the equivalent English version of the WO 00/26559.

Claims 1, 3 and 14-15:

Loeffler (Fig. 1; column 1, line 66 – column 5, line 48) discloses a multi-speed transmission comprising:

With respect to claim 1,

- An engine, (i.e., Fig. 1, element 11);
- A gear-type transmission (i.e., Fig. 1, element 10);
- A first input shaft (i.e., Fig. 1, being one of the input shafts 12 and 13);
- A first clutch (i.e., Fig. 1, being one of the friction clutches 29 and 30);
- A second input shaft (i.e., Fig. 1, being the other one of the input shafts 12 and 13);
- A second clutch (i.e., Fig. 1, being the other one of the friction clutches 29 and 30);
- An output shaft (i.e., Fig. 1 element 25);
- A plural numbers of gear trains (i.e., Fig. 1, elements 17 and 18) provided between said first input shaft and said output shaft and between said second input shaft and said output shaft (i.e., Fig. 1);

- A plurality of claw clutches (i.e., Fig. 1, elements 23, 24, and 28) provided on said gear trains;
- A first motor (i.e., Fig. 1, being one of the corresponding motors 34 and 35) connected to said first input shaft;
- A second motor (i.e., Fig. 1, being the other one of the corresponding motors 34 and 35) connected to said second input shaft;
- A battery (i.e., column 3, line 20);
- A control unit (i.e., column 2, line 47) for controlling the transmission;
- Wherein said control unit is configured to control the drive of either one of said first motor and said second motor so as to suppress or prevent any possible thrust on output shaft torque due to inertia torque after torque transmitted by said second friction clutch coincides substantially with output shaft torque of said engine in conducting gear-shift through a change-over from said first friction clutch to said second friction clutch (i.e., column 3, line 47 – column 4, line 34);

With respect to claim 3,

- Wherein either one of said first motor or said second motor is driven so that wear-out of said claw clutch is inherently suppressed by controlling a rotating speed of either one of said first input shaft and said second input shaft, when conducting gear-shift through change-over of said gear trains with said claw clutch (i.e., column 3, line 47 – column 4, line 2).

With respect to claim 14,

- Wherein said first or second motor is driven so as to inherently absorb torque from said output shaft when up-shifting (i.e., column 3, line 47 – column 4, line 34);

With respect to claim 15,

- Wherein said first or second motor is driven so as to supply torque to said output shaft when up-shifting (i.e., column 5, lines 24-48).

10. Claims 2 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/26559.

Note:

To facilitate a better understanding as well as greater accuracy in explaining the following claim rejections, the examiner will refer to the U. S. Patent No. 6,712,734 to Loeffler, which is the equivalent English version of the WO 00/26559.

Claims 2 and 18:

Loeffler (Fig. 1; column 1, line 66 – column 5, line 48) discloses a multi-speed transmission comprising:

With respect to claim 2,

- An engine, (i.e., Fig. 1, element 11);
- A gear-type transmission (i.e., Fig. 1, element 10);

- A first input shaft (i.e., Fig. 1, being one of the input shafts 12 and 13);
- A first clutch (i.e., Fig. 1, being one of the friction clutches 29 and 30);
- A second input shaft (i.e., Fig. 1, being the other one of the input shafts 12 and 13);
- A second clutch (i.e., Fig. 1, being the other one of the friction clutches 29 and 30);
- An output shaft (i.e., Fig. 1 element 25);
- A plural numbers of gear trains (i.e., Fig. 1, elements 17 and 18) provided between said first input shaft and said output shaft and between said second input shaft and said output shaft (i.e., Fig. 1);
- A plurality of claw clutches (i.e., Fig. 1, elements 23, 24, and 28) provided on said gear trains;
- A first motor (i.e., Fig. 1, being one of the corresponding motors 34 and 35) connected to said first input shaft;
- A second motor (i.e., Fig. 1, being the other one of the corresponding motors 34 and 35) connected to said second input shaft;
- A battery (i.e., column 3, line 20);
- A control unit (i.e., column 2, line 47) for controlling the transmission;
- Wherein said control unit is configured to control the drive of either one of said first motor and said second motor so as any possible drawn on output shaft is suppressed or prevented after an potential increase in a pressing force upon said

second friction clutch starts in conducting gear-shift through a change-over from said first friction clutch to said second friction clutch (i.e., column 3, line 47 – column 4, line 34);

With respect to claim 18,

- Wherein either one of said first motor or said second motor is driven so that wear-out of said claw clutch is inherently suppressed by controlling a rotating speed of either one of said first input shaft and said second input shaft, when conducting gear-shift through change-over of said gear trains with said claw clutch (i.e., column 3, line 47 – column 4, line 2).

Response to Arguments

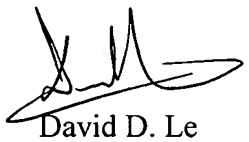
11. Applicant's arguments with respect to claims 1-3, 14-15 and 18 have been considered but are moot in view of the new interpretation(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David D. Le
Examiner
Art Unit 3681
11/28/2005

ddl